UKEV & GSEV Autumn Meeting in Saarbrücken 2020

Dates: 2 and 3 September 2020, Saarland University, online

2 September 2020

1 pm Opening of the video conference room

1.15 pm conference opening and welcome (organising committee and Presidents from UKEV and GSEV)

1.45-2.45 pm EV Session 1 – non-mammalian EVs (chair: Yvonne Couch/UKEV)

1.45-2.15 pm Invited speaker: Silke Robatzek (LMU Munich)

2.15-2.30 pm Aaron Scott (University of Bristol) In vivo characterisation of endogenous cardiovascular extracellular vesicles in larval and adult zebrafish

2.30-2.45 pm Benedikt Beckmann (Humboldt University Berlin) Extracellular vesicle-mediated delivery of specific bacterial RNAs to host cells during infection

2.45-3 pm Break

3:00-3:45 pm Career session – round table discussion (chair: Claudia Goettsch/GSEV)

Early career scientist are invited to join this virtual roundtable discussion and bring their questions and concerns. Questions and comments can be shared verbally or via chat.

3:00-3:10 Introduction to the panelists and topics

3:10-3:45 Two breakout sessions

1. Career as an EV researcher
   Alexandra Kiemer (University Saarbrücken, Germany), Pieter Vader (University Medical Center Utrecht, Netherlands) and Gregor Fuhrmann (Helmholtz Institute Saarbrücken, Germany)
   The EV research is a rapid growing field in a variety of biomedical disciplines. To be trained as an EV researcher opens multiply opportunities in different research fields.

2. Career navigation in challenging times.
   Sergio Bertazzo (UCL, UK) and Claudia Goettsch (RWTH Aachen, Germany)
   Within the pandemic, science is also severely affected. Unlimited lab access, attending seminars, personal meetings, networking etc. – all important for a research career – are now a challenge. What can we learn and where are opportunities?

3:45-4 pm Break

4-5 pm EV Session 2 – EVs in immunology (chair: Gregor Fuhrmann/GSEV)

4-4.30 pm Invited speaker: Alexandra Kiemer (Saarbrücken)

4.30-4.45 pm Oskar Stauffer (Max Planck Institute for Medical Research) Bottom-up assembly of synthetic EVs identifies immune-synapse signalling mechanisms

4.45-5 pm Richard Kelwick (Imperial College London) AL-PHA beads: engineered biomaterials for detecting extracellular vesicle-associated metalloproteinase biosensors

5-6 pm Keynote lecture: Clotilde Thery (Paris) (chair: Gregor Fuhrmann/GSEV)
9-10 am **EV Session 3 – EV imaging** (chair: Claudia Göttsch/GSEV)

9-9.30 am **Invited Speaker: Sergio Bertazzo, UCL**

9:30-9:45 am Andre Gorgens (Karolinska Institutet), Using Biological Reference Materials for Optimization of Imaging Flow Cytometry-based Single EV Analysis Methods

9:45-10:00 am Sebastian Neuber (German Heart Center Berlin), MicroRNA cargo of extracellular vesicles from mesenchymal stromal cells: a double-edged sword in cardiovascular disease therapy

10-10.15 Break

10.15-11.05 am **Rapid fire talk session** (chair: Yvonne Couch/Owen Davies, UKEV)

- 5’ live talks plus 3’ Q&A; the organising committee selects the best talk to receive an award
  - Luisa Weiss, University College Dublin, Ireland
    Non-valvular atrial fibrillation patients anticoagulated with rivaroxaban compared with warfarin exhibit reduced circulating extracellular vesicles with attenuated proinflammatory protein signatures
  - Hannah Mizen, Queen Mary University of London, UK
    Exploring the Role of Small Extracellular Vesicle Encapsulated MicroRNAs in Senescence and Skin Ageing
  - Ana Filipa Louro, Universidade Nova de Lisboa, Portugal
    hiPSC and hiPSC-cardiomyocytes as alternative EV sources for cardiac regeneration, Portugal
  - William Edward Hotham, University of Cambridge
    Comparing extracellular vesicles produced by bone marrow mesenchymal stem cells of human, bovine, equine and murine origin
  - Mairead Hyland, Keele University at the RJAH Orthopaedic Hospital, Oswestry, UK
    Analysis of Extracellular Vesicle Cargo from Umbilical Cord Mesenchymal Stem Cells

11.05-11.30 Break

11.30-12.30 pm **EV Session 4 – EVs in regenerative medicine** (chair: Owen Davies/UKEV)

11.30 pm **Invited speaker: Pieter Vader (Utrecht)** Potential of extracellular vesicles for therapeutic RNA delivery

12-12.15 pm Kenny Man (University of Birmingham) Epigenetic regulation promotes the therapeutic potency of osteoblast-derived extracellular vesicles for bone regeneration

12.15-12.30 pm Marianne Joerger-Messerli (University of Bern) MicroRNA cargo of umbilical cord-derived extracellular vesicles and its potential role in neuroregeneration

12.30-1 pm Awards and closing